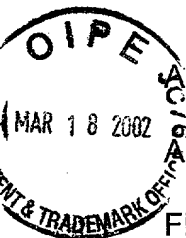


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PATENT
3782-0196P

IN THE U. S. PATENT AND TRADEMARK OFFICE



APPLICANTS: Per ERICSON et al. CONF.: 5644
APPLN. NO.: 09/986,762 GROUP: Unassigned
FILED: November 9, 2001 EXAMINER: Unassigned
FOR: RECORDING AND COMMUNICATION OF
HANDWRITTEN INFORMATION

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

March 18, 2002

Sir:

The following preliminary amendments and remarks are respectfully submitted in connection with the above-identified application.

IN THE CLAIMS:

Please amend the claims as follows:

1. (Amended) A hand-held user unit for writing down and recording handwritten information, comprising means for recording said information and a memory for storing the same, characterized in that the memory comprises a first memory unit located in the user unit and a second memory unit located in an external data storage device, which memory units are connected in such a way that, from the point of view of the user, they form a coherent memory unit.

2. (Amended) A hand-held user unit according to claim 1, further comprising a means for transmission of information between the first and the second memory units,

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the first memory unit being arranged to receive and store the recorded information from the recording means and the information transmission means being arranged to transfer according to predetermined rules at least a subset of the recorded information from the first to the second memory unit for storage therein.

3. (Amended) A hand-held user unit according to claim 2, in which the information transmission means is arranged to carry out exclusively one-way transmission of information from the first to the second memory unit.

4. (Amended) A hand-held user unit according to claim 2, in which said rules comprise transferring said information when the first memory unit has attained a given level of fullness.

5. (Amended) A hand-held user unit according to claim 2, in which said rules comprise transferring said information when this has been stored in the first memory unit for a certain period of time.

6. (Amended) A hand-held user unit according to claim 2, in which the information transmission means is arranged to carry out wireless transmission of information from the user unit.

7. (Amended) A hand-held user unit according to claim 2, in which the information transmission means is arranged to transfer all the recorded information to the second memory unit.

8. (Amended) A hand-held user unit according to claim 2, which is arranged, after recording a "send" command, to send all information associated with the "send"

command and stored in the first and second memory units to an external information management unit.

9. (Amended) A hand-held user unit according to claim 8, in which the information transmission means is arranged, after recording the "send" command, to send a subset of the recorded information associated with the "send" command from the first memory unit to the second memory unit.

10. (Amended) A hand-held user unit according to claim 1, in which the recorded information comprises a plurality of absolute positions that form an electronic version of the handwritten information.

11. (Amended) A hand-held user unit according to claim 9, which is arranged, after recording the "send" command, to obtain an address for the information management unit, by a request to an external look-up unit and on the basis of said positions.

12. (Amended) A hand-held user unit according to claim 11, which is arranged to obtain said address via a communication unit in the external data storage device.

13. (Amended) A hand-held user unit according to claim 1, in which the second memory unit has a data storage capacity that is considerably larger than the data storage capacity of the first memory unit.

14. (Amended) A hand-held user unit according to claim 1, in which said means for recording handwritten information comprises an image sensor for optical recording of a position code on a base.

15. (Amended) A hand-held user unit, comprising a means for recording handwritten information and a means for transferring information from the user unit, the user unit in a first memory management mode being arranged to store the recorded information in an internal memory unit and, after detection of a "send" command, to communicate at least a subset of the recorded information by means of the information transmission means, characterized in that it is switchable to a second memory management mode, in which the information transmission means is caused to transfer the recorded information automatically from the internal memory unit to an external memory unit in an external data storage device in such a way that, from the point of view of the user, the memory units form a coherent memory unit.

16. (Amended) A hand-held user unit according to claim 15, which, in the second memory management mode and after the detection of the "send" command, is arranged to cause the information transmission means to transfer the "send" command and all information associated with the "send" command in the internal memory unit to the external memory unit.

17. (Amended) A hand-held user unit according to claim 15, which, in the second memory management mode, is arranged to carry out exclusively one-way transmission of information from the internal to the external memory unit, and to communicate all information associated with the "send" command via a communication unit in the external data storage device.

18. (Amended) A system for information management, comprising an information management unit and a hand-held user unit which is designed for writing down and recording handwritten information, the user unit being arranged to store the recorded information in a memory and to communicate a required part thereof to the information management unit via a communication network, characterized in that the memory

comprises a first memory unit located in the user unit and a second memory unit located in an external data storage device, which memory units are connected in such a way that, from the point of view of a user, they form a coherent memory unit.

19. (Amended) A system according to claim 18, in which the first memory unit is arranged to receive and store the recorded information and in which the user unit is arranged to transfer in accordance with predetermined rules at least a subset of the recorded information from the first to the second memory unit for storage therein.

20. (Amended) A system according to claim 19, in which the user unit is arranged to carry out exclusively one-way transmission of information from the first to the second memory unit, and to communicate the required part of the recorded information to the information management unit via a communication unit in the external data storage device.

21. (Amended) A system according to claim 18, which is arranged, after recording a "send" command, to send all the information associated with the "send" command and stored in the first and second memory units to the information management unit.

22. (Amended) A system according to claim 21, in which the user unit is arranged, after recording the "send" command, to send a subset of the recorded information associated with the "send" command, from the first memory unit to the external data storage device.

23. (Amended) A system according to claim 21, further comprising a base with a position code, in which the user unit comprises an image sensor for optical recording of the position code and a processor unit for converting the recorded position code into

absolute positions that form an electronic version of the handwritten information, and in which the user unit is arranged to obtain an address for the information management unit, after recording the "send" command, by a request to an external look-up unit and on the basis of said positions.

24. (Amended) A system according to claim 23, in which the user unit is arranged to obtain said address via a communication unit in the external data storage device.

25. (Amended) A system according to claim 18, in which the external data storage device comprises a network server with an interface that allows a user of the user unit to access the recorded information.

26. (Amended) A method for providing memory capacity for a user of a hand-held user unit which is designed for recording and communicating handwritten information, comprising the steps of reserving memory capacity for the user unit in an external data storage device, receiving recorded information from the user unit and storing the same in the external data storage device, and sending the recorded information to an information management unit in response to a "send" command.

27. (Amended) A method according to claim 26, comprising the step of charging the user on the basis of the memory capacity reserved for the user in the external data storage device.

28. (Amended) A method according to claim 26, comprising the step of storing the received information for a predetermined period of time from the time of recording, the user being charged on the basis of the length of the period of time.

29. (Amended) A method according to claim 26, in which the “send” command is received from the user unit.

30. (Amended) A method for memory management in a user unit, which is arranged to record handwritten information, characterized by the steps of storing the recorded information in a first memory unit in the user unit, and transferring at least a subset of the recorded information from the first memory unit to a second memory unit in an external data storage device in such a way that, from the point of view of a user, the first and second memory units form a coherent memory unit.

Abstract

[illegible]

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

The claims have been amended as follows:

1. (Amended) A hand-held user unit for writing down and recording handwritten information, comprising means [(2, 3)] for recording said information and a memory for storing the same, characterized in that the memory comprises a first memory unit [(4)] located in the user unit and a second memory unit [(12)] located in an external data storage device, which memory units are connected in such a way that, from the point of view of the user, they form a coherent memory unit.

2. (Amended) A hand-held user unit according to claim 1, further comprising a means [(5)] for transmission of information between the first and the second memory units [(4, 12)], the first memory unit [(4)] being arranged to receive and store the recorded information from the recording means [(2, 3)] and the information transmission means [(5)] being arranged to transfer according to predetermined rules at least a subset of the recorded information from the first to the second memory unit [(4, 12)] for storage therein.

3. (Amended) A hand-held user unit according to claim 2, in which the information transmission means [(5)] is arranged to carry out exclusively one-way transmission of information from the first to the second memory unit [(4, 12)].

4. (Amended) A hand-held user unit according to claim 2 [or 3], in which said rules comprise transferring said information when the first memory unit [(4)] has attained a given level of fullness.

5. (Amended) A hand-held user unit according to claim 2[, 3 or 4], in which said rules comprise transferring said information when this has been stored in the first memory unit [(4)] for a certain period of time.

6. (Amended) A hand-held user unit according to [any one of claims 2-5] claim 2, in which the information transmission means [(5)] is arranged to carry out wireless transmission of information from the user unit.

7. (Amended) A hand-held user unit according to [any one of claims 2-6] claim 2, in which the information transmission means [(5)] is arranged to transfer all the recorded information to the second memory unit [(12)].

8. (Amended) A hand-held user unit according to [any one of claims 2-7] claim 2, which is arranged, after recording a "send" command, to send all information associated with the "send" command and stored in the first and second memory units [(4, 12)] to an external information management unit [(7-9)].

9. (Amended) A hand-held user unit according to claim 8, in which the information transmission means [(5)] is arranged, after recording the "send" command, to send a subset of the recorded information associated with the "send" command from the first memory unit [(4)] to the second memory unit [(12)].

10. (Amended) A hand-held user unit according to [any one of the preceding claims] claim 1, in which the recorded information comprises a plurality of absolute positions that form an electronic version of the handwritten information.

11. (Amended) A hand-held user unit according to claim[s] 9 [and 10], which is arranged, after recording the "send" command, to obtain an address for the information

management unit [(7-9)], by a request to an external look-up unit [(14)] and on the basis of said positions.

12. (Amended) A hand-held user unit according to claim 11, which is arranged to obtain said address via a communication unit [(13)] in the external data storage device [(10)].

13. (Amended) A hand-held user unit according to [any one of the preceding claims] claim 1, in which the second memory unit [(12)] has a data storage capacity that is considerably larger than the data storage capacity of the first memory unit [(4)].

14. (Amended) A hand-held user unit according to [any one of the preceding claims] claim 1, in which said means [(2, 3)] for recording handwritten information comprises an image sensor [(2)] for optical recording of a position code [(16)] on a base [(15)].

15. (Amended) A hand-held user unit, comprising a means [(2, 3)] for recording handwritten information and a means [(5)] for transferring information from the user unit, the user unit in a first memory management mode being arranged to store the recorded information in an internal memory unit [(4)] and, after detection of a "send" command, to communicate at least a subset of the recorded information by means of the information transmission means [(5)], characterized in that it is switchable to a second memory management mode, in which the information transmission means [(5)] is caused to transfer the recorded information automatically from the internal memory unit [(4)] to an external memory unit [(12)] in an external data storage device [(10)] in such a way that, from the point of view of the user, the memory units [(4, 12)] form a coherent memory unit.

16. (Amended) A hand-held user unit according to claim 15, which, in the second memory management mode and after the detection of the "send" command, is arranged to cause the information transmission means [(5)] to transfer the "send" command and all information associated with the "send" command in the internal memory unit [(4)] to the external memory unit [(12)].

17. (Amended) A hand-held user unit according to claim 15 [or 16], which, in the second memory management mode, is arranged to carry out exclusively one-way transmission of information from the internal to the external memory unit [(4, 12)], and to communicate all information associated with the "send" command via a communication unit [(13)] in the external data storage device [(10)].

18. (Amended) A system for information management, comprising an information management unit [(7-9)] and a hand-held user unit [(1)] which is designed for writing down and recording handwritten information, the user unit [(1)] being arranged to store the recorded information in a memory and to communicate a required part thereof to the information management unit [(7-9)] via a communication network, characterized in that the memory comprises a first memory unit [(4)] located in the user unit [(1)] and a second memory unit [(12)] located in an external data storage device [(10)], which memory units are connected in such a way that, from the point of view of a user, they form a coherent memory unit.

19. (Amended) A system according to claim 18, in which the first memory unit [(4)] is arranged to receive and store the recorded information and in which the user unit [(1)] is arranged to transfer in accordance with predetermined rules at least a subset of the recorded information from the first to the second memory unit [(4, 12)] for storage therein.

20. (Amended) A system according to claim 19, in which the user unit [(1)] is arranged to carry out exclusively one-way transmission of information from the first to the second memory unit [(4, 12)], and to communicate the required part of the recorded information to the information management unit [(7-9)] via a communication unit [(13)] in the external data storage device [(10)].

21. (Amended) A system according to [any one of claims 18-20] claim 18, which is arranged, after recording a "send" command, to send all the information associated with the "send" command and stored in the first and second memory units [(4, 12)] to the information management unit [(7-9)].

22. (Amended) A system according to claim 21, in which the user unit [(1)] is arranged, after recording the "send" command, to send a subset of the recorded information associated with the "send" command, from the first memory unit [(4)] to the external data storage device [(10)].

23. (Amended) A system according to claim 21 [or 22], further comprising a base [(15)] with a position code [(16)], in which the user unit [(1)] comprises an image sensor [(2)] for optical recording of the position code and a processor unit [(3)] for converting the recorded position code [(16)] into absolute positions that form an electronic version of the handwritten information, and in which the user unit [(1)] is arranged to obtain an address for the information management unit [(7-9)], after recording the "send" command, by a request to an external look-up unit [(14)] and on the basis of said positions.

24. (Amended) A system according to claim 23, in which the user unit [(1)] is arranged to obtain said address via a communication unit [(13)] in the external data storage device [(10)].

25. (Amended) A system according to [any one of claims 18-24] claim 18, in which the external data storage device [(10)] comprises a network server with an interface that allows a user of the user unit [(1)] to access the recorded information.

26. (Amended) A method for providing memory capacity for a user of a hand-held user unit [(1)] which is designed for recording and communicating handwritten information, comprising the steps of reserving memory capacity for the user unit [(1)] in an external data storage device [(10)], receiving recorded information from the user unit [(1)] and storing the same in the external data storage device [(10)], and sending the recorded information to an information management unit [(7-9)] in response to a "send" command.

27. (Amended) A method according to claim 26, comprising the step of charging the user on the basis of the memory capacity reserved for the user in the external data storage device [(10)].

28. (Amended) A method according to claim 26 [or 27], comprising the step of storing the received information for a predetermined period of time from the time of recording, the user being charged on the basis of the length of the period of time.

29. (Amended) A method according to [any one of claims 26-28] claim 26, in which the "send" command is received from the user unit [(1)].

30. (Amended) A method for memory management in a user unit [(1)], which is arranged to record handwritten information, characterized by the steps of storing the recorded information in a first memory unit [(4)] in the user unit [(1)], and transferring at

least a subset of the recorded information from the first memory unit [(4)] to a second memory unit [(12)] in an external data storage device [(10)] in such a way that, from the point of view of a user, the first and second memory units [(4, 12)] form a coherent memory unit.